AMENDMENTS TO THE CLAIMS

1. (Previously presented) A display system for a device, comprising:
computer executable instructions operable to:
receive images from a first sensor and a second sensor representing scenery outside the device;
detect moving objects in the images;
fuse the images to a single viewpoint;
transform the fused image to a first viewpoint image from a first operator station in the device and a second viewpoint image from a second operator station in the device, wherein the first and second viewpoint images conform to the scenery outside the device from each operator station; and
generate a third display area associated with at least two mutually exclusive windows of information on a display device for the first operator station;
generate a third display area associated with at least two mutually exclusive windows of information on another display device for the second operator station;
wherein the third display areas can be customized independently by the operators to display detailed information related to the information displayed in the associated windows.

2. (Original) The display system of Claim 1, further comprising:
computer executable instructions operable to:
combine the first and second viewpoint images with symbols, wherein the symbols represent information regarding the operational state of the device and the moving objects detected in the images.

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3. (Original) The display system of Claim 1, wherein the instructions for detecting moving objects in the first sensor image are configured to execute in a first processor, and the instructions for detecting moving objects in the second sensor image are configured to execute in a second processor simultaneously with the instructions in the first processor.

4. (Original) The display system of Claim 3, wherein the instructions for transforming the fused image to the first viewpoint image are configured to execute in the first processor, and the instructions for transforming the fused image to the second viewpoint image are configured to execute in the second processor.

5. (Original) The display system of Claim 2, wherein the symbols represent the moving objects in the vicinity of the device.

6. (Original) The display system of Claim 2, wherein at least one of the first and second viewpoint images include environmental information for the area where the device is operating.

7. (Original) The display system of Claim 2, wherein the symbols represent weather hazards in the vicinity of the device.

8. (Original) The display system of Claim 2, wherein the computer executable instructions are further operable to receive an enhanced image from a third sensor configured to provide an image of the out-the-window scenery in low-visibility conditions

9. (Original) The display system of Claim 8, wherein the computer executable instructions are further operable to fuse the single viewpoint image with the enhanced image.

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10. (Original) The display system of Claim 9, wherein the computer executable instructions are further operable to utilize data from at least one position sensor to determine the location of the objects with respect to the device.

11. (Original) The display system of Claim 2, wherein the computer executable instructions are further operable to utilize data from off-board data sources regarding the objects.

12. (Original) The display system of Claim 1, wherein the first sensor and the second sensor are video cameras.

13. (Original) The display system of Claim 8, wherein the third sensor is a RADAR sensor.

14. (Original) The display system of Claim 8, wherein the third sensor is a FLIR sensor.

15. (Canceled)

16. (Previously presented) A method for providing an out-the-window visual scene on a display device, comprising:

receiving an image of a portion of the out-the-window visual scene from the viewpoint of a first type of sensor;

receiving another image of a portion of the out-the-window visual scene from the viewpoint of another of the first type of sensor;

fusing the images from the first type of sensors into a combined image to generate a first fused image;

transforming the fused image to a first operator viewpoint and to a second operator viewpoint; and

outputting the first operator viewpoint image to a first display device and the second operator viewpoint image to a second display device, wherein the display devices are positioned to provide the portion of a desired

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out-the window visual scene in combination with a window that provides another portion of the desired out-the-window visual scene, and the viewpoint images are aligned with and scaled to conform to the out-the-window visual scene.

17. (Original) The method of Claim 16, further comprising detecting objects in the first fused image from the first type of sensor.

18. (Original) The method of Claim 17, further comprising combining the first fused image with symbols representing the objects.

19. (Original) The method of Claim 16, further comprising transforming the first operator viewpoint image and the second operator viewpoint image to conform to the out-the-window visual scene.

20. (Original) The method of Claim 16, further comprising fusing the first fused image with an enhanced image of a portion of the out-the-window scenery from at least one of the group of a RADAR sensor and a FLIR sensor, to generate a second fused image.

21. (Original) The method of Claim 16, further comprising fusing the second fused image with an enhanced image of a portion of the out-the-window scenery from at least one of the group of a RADAR sensor and a FLIR sensor, to generate a second fused image.

22. (Original) The method of Claim 21, further comprising: transforming the second fused image to the first operator viewpoint and to the second operator viewpoint.

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23. (Original) The method of Claim 20, further comprising: providing portions of the transformed image with data from a terrain map database.

24. (Previously presented) A device, comprising:

a display device; and

a display processor operable to:

receive a first sensor image representing a portion of scenery outside the device;

transform the first sensor image to a viewpoint image from an operator station in the device, wherein the viewpoint image is sized and oriented to conform to the scenery outside the device from the operator station; and

output the first operator viewpoint image to the display device, wherein the display device is positioned to provide the portion of a desired out-the window visual scene in combination with a window that provides another portion of the desired out-the-window visual scene, and the viewpoint image is aligned with and scaled to conform to the out-the-window visual scene.

25. (Original) The device of Claim 24, wherein the display processor is further operable to combine the viewpoint image with symbols, wherein the symbols represent information regarding the operational state of the device and the moving objects detected in the images.

26. (Original) The device of Claim 24, wherein the display processor is further operable to detect moving objects in the first sensor image

27. (Original) The device of Claim 24, wherein the display processor is further operable to generate symbols representing moving objects in the sensor image and the operational state of the device.

28. (Original) The device of Claim 24, wherein the display processor is further operable to generate symbols representing weather hazards in the vicinity of the device.

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29. (Original) The device of Claim 24, wherein the display processor is further operable to receive an enhanced image of the out-the-window scenery in low-visibility conditions from a second sensor.

30. (Original) The device of Claim 29, wherein the display processor is further operable to fuse the viewpoint image with the enhanced image.

31. (Original) The device of Claim 26, wherein the display processor is further operable to utilize data from at least one position sensor to determine the location of the objects with respect to the device.

32. (Original) The device of Claim 26, wherein the display processor is further operable to utilize data from off-board data sources regarding the objects.

33. (Original) The device of Claim 24, wherein the sensor is a video camera.

34. (Original) The device of Claim 29, wherein the second sensor is a RADAR sensor.

35. (Original) The device of Claim 29, wherein the second sensor is a FLIR sensor.

36. (Original) The device of Claim 24, wherein the display processor is further operable to generate a common display area associated with at least two mutually exclusive windows of information on the display device, wherein the common display area can be customized by the operator to display detailed information related to the information displayed in the associated windows.

37. (Previously presented) An aircraft, comprising:

a crewstation with cockpit windows;

a first display device for one crewmember;

a second display device for another crewmember; and

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a display processor operable to:

receive an image of an out-the-window visual scene from the viewpoint of a first type of sensor;

receive another image of a portion of the out-the-window visual scene from the viewpoint of another of the first type of sensor;

fuse the images from the first type of sensors into a combined image to generate a first fused image;

transform the fused image to a first operator viewpoint and to a second operator viewpoint;

transform the first operator viewpoint image and the second operator viewpoint image to conform to the size and orientation of the out-the-window visual scene; and

output the first operator viewpoint image to the first display device and the second operator viewpoint image to the second display device, wherein the display devices are positioned to provide the portion of a desired out-the window visual scene in combination with a cockpit window that provides another portion of the desired out-the-window visual scene, and the viewpoint images are aligned with and scaled to conform to the out-the-window visual scene.

38. (Original) The aircraft of Claim 37, wherein the display processor is further operable to detect objects in the first fused image from the first type of sensor.

39. (Original) The aircraft of Claim 38, wherein the display processor is further operable to combine the first fused image with symbols representing the objects and primary flight information for the aircraft.

40. (Canceled)

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41. (Original) The aircraft of Claim 37, wherein the display processor is further operable to fuse the first fused image with an enhanced image of a portion of

the out-the-window scenery from at least one of the group of a RADAR sensor and a FLIR sensor, to generate a second fused image.

42. (Original) The aircraft of Claim 41, wherein the display processor is further operable to fuse the second fused image with an enhanced image of a portion of the out-the-window scenery from at least one of the group of a RADAR sensor and a FLIR sensor, to generate a second fused image.

43. (Original) The aircraft of Claim 42, wherein the display processor is further operable to transform the second fused image to the first operator viewpoint and to the second operator viewpoint.

44. (Original) The aircraft of Claim 43, wherein the display processor is further operable to provide portions of the transformed images using data from a terrain map database.

45. (Original) The aircraft according to Claim 37 further comprising:
a terrain database coupled to provide the display processor with at least a portion of the required out-the-window field of view on the display device.

46. (Original) The aircraft of Claim 37, wherein the display processor is further operable to display one of the operator viewpoint displays to the operator acting as pilot in command of the aircraft during a predefined aircraft operational state, and to allow the pilot in command to choose an option on the display device to view detailed information about the aircraft and aircraft subsystems during other aircraft operational states.

47. (Original) The aircraft of Claim 46, wherein the display processor is further operable to generate a common display area associated with at least two mutually exclusive windows of information on each display device, wherein the common display area can be customized by the operator to display detailed information related to the information displayed in the associated windows.

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